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**(74) Common Representative:** NOVOZYMES A/S; Patents, Krogshoejvej 36, DK-2880 Bagsvaerd (DK).

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**(71) Applicant (for all designated States except US):**  
NOVOZYMES A/S [DK/DK]; Krogshoejvej 36, DK-2880 Bagsvaerd (DK).

**(72) Inventors; and**  
**(75) Inventors/Applicants (for US only):** TANG, Lan [CN/CN]; ZhiChun Road 57-1-707, Hai Dian District, 100080 Beijing (CN). WU, Wenping [CN/CN]; Room 103, Er Dan Yuan in Building #3, Yi Qu, Dong Li Xiao Qu, Shang Di Zone, Haidian District, 100085 Beijing (CN). DUAN, Junxin [CN/CN]; Zhi Chun Lu 57-1-707, Hai Dian District, 100080 Beijing (CN). JOHANNESEN, Pia, Francke [DK/DK]; Haarbyvej 11, DK-2740 Skovlunde (DK).

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**(54) Title:** THERMOSTABLE ALPHA-AMYLASES

**(57) Abstract:** An isolated polynucleotide comprising an open reading frame encoding a polypeptide having alpha-amylase activity, the polypeptide selected from the group consisting of: a) a polypeptide comprising an amino acid sequence which has at least 70% identity with amino acids 22 to 450 of SEQ ID NO:4; b) a polypeptide comprising an amino acid sequence which has at least 70% identity with the polypeptide encoded by the amylase encoding part of the polynucleotide inserted into a plasmid present in the E. coli host deposited under the Budapest Treaty with DSMZ under accession number DSM 15334; c) a polypeptide encoded by a polynucleotide comprising a nucleotide sequence which has at least 70% identity with the sequence shown from position 68 to 1417 in SEQ ID NO:3; and d) a fragment of (a), (b) or (c) that has alpha-amylase activity.

# INTERNATIONAL SEARCH REPORT

Internal Application No  
PCT/DK 03/00882

**A. CLASSIFICATION OF SUBJECT MATTER**  
**IPC 7 C12N9/30 C12N15/56 //A23D8/04,D06L1/14,(C12N9/30,  
C12R1:645)**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
**IPC 7 C12N**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**EPO-Internal, BIOSIS, WPI Data, CHEM ABS Data**

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	"Developments in industrial microbiology" A PUBLICATION OF THE SOCIETY FOR INDUSTRIAL MICROBIOLOGY, PROCEEDINGS OF THE THIRTY-SIXTH GENERAL MEETING OF THE SOCIETY FOR INDUSTRIAL MICROBIOLOGY, vol. 21, 11 - 17 August 1979, pages 327-337, XP002276036 Pittsburgh, Pennsylvania the whole document	1-16, 18-29
Y	---	10-17
X	WO 96 01323 A (DANISCO ;MICHELSSEN BIRGIT (DK); RASMUSSEN PREBEN (DK)) 18 January 1996 (1996-01-18) the whole document ---	1-29
		-/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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- "E" earlier document but published on or after the international filing date
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- "&" document member of the same patent family

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

YVONNE SIÖSTEE / ELY

## INTERNATIONAL SEARCH REPORT

Internal	Application No
PCT/DK 03/00882	

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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Y		10-17
A	SANDRA L. TURCHI ET AL: "Improved purification of alfa-amylase isolated from rhizomucor pusillus by affinity chromatography" CURRENT MICROBIOLOGY, vol. 15, 1987, pages 203-205, XP002276037 the whole document ---	1-17
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